



CofC

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : US 7,233,556 B2      Issue Date : Jun. 19, 2007  
Serial No. : 10/711,212      Filing Date : Sep. 01, 2004  
Inventor : Yu-Hung Sun  
Docket No. : LITP0043USA

Title: DISK DISCRIMINATION METHOD

**Certificate**

To:      Commissioner for Patents  
P.O. BOX 1450  
Alexandria, VA 22313-1450

JUL 31 2007

**of Correction**

Subject: Request for Certificate of Correction of Office Mistake

Dear Sir:

The above-identified patent was issued on 06/19/2007. The applicant found that the residence of the Assignee is incorrect on the front page of the patent (Attachment 1). Documents on record indicate this as an Office mistake of consequence.

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.322 to correct the residence of the Assignee from "Nelhu" to "Neihu" as correctly listed on the Fee Transmittal submitted on 05/15/2007 (Attachment 2) and Notice of Recordation of Assignment Document dated Sep. 02, 2004 (Attachment 3).

AUG 3 2007

Respectfully submitted,

*Winston Hsu*

Date: JUL 26 2007

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : [winstonhsu@naipo.com](mailto:winstonhsu@naipo.com)

Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

Please correct the  
residence of assignee  
from "Nelhu" to "Neihu"



US007233556B2

(12) **United States Patent**  
Sun

(10) **Patent No.:** US 7,233,556 B2  
(45) **Date of Patent:** Jun. 19, 2007

(54) **DISK DISCRIMINATION METHOD**

(75) Inventor: Yu-Hung Sun, Taipei (TW)

(73) Assignee: Lite-On It Corporation, Nelhu, Taipei (TW)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 380 days.

(21) Appl. No.: 10/711,212

(22) Filed: Sep. 1, 2004

(65) **Prior Publication Data**

US 2005/0052977 A1 Mar. 10, 2005

(30) **Foreign Application Priority Data**

Sep. 4, 2003 (TW) ..... 92124517 A

(51) Int. Cl.  
G11B 7/00 (2006.01)

(52) U.S. Cl. ..... 369/53.23

(58) **Field of Classification Search** ..... 369/53.2,  
369/53.23, 44.27, 44.25, 44.26, 94

See application file for complete search history.

## (56)

**References Cited****U.S. PATENT DOCUMENTS**

6,327,234 B1 *	12/2001	Kamiyama et al. ....	369/53.23
6,487,153 B2 *	11/2002	Kamiyama et al. ....	369/53.23
6,747,931 B1 *	6/2004	Park .....	369/53.23
6,879,555 B2 *	4/2005	Takeuchi .....	369/53.23
6,956,801 B2 *	10/2005	Horimoto .....	369/53.2

\* cited by examiner

Primary Examiner—Thang V. Tran  
(74) Attorney, Agent, or Firm—Winston Hsu

## (57)

**ABSTRACT**

A method for discriminating an optical disk is disclosed. Peak values and trough values of focus error signal and RF level signal are detected by an operation of focus search. Threshold levels for detecting each material layer of the optical disk are determined according to the peak values and the trough values. Thereafter another focus search for the optical disk is executed to calculate a thickness of the substrate and a distance between the first and the second recording layer of the optical disk according to the threshold levels. Thus the type of the optical disk can be discriminated.

25 Claims, 5 Drawing Sheets

100  
Operate a first focus search for the optical disk

Determine threshold levels of a focus error signal and a RF level signal for detecting each material layer of the optical disk

110  
Operate a second focus search for detecting the distances between the material layers so as to discriminate the format of the optical disk

120  
End

AUG 3 2007



Attachment 3

951984



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231



SEPTEMBER 02, 2004

PTAS

\*800013520A\*

NAIPO (NORTH AMERICA INTERNATIONAL PATENT  
P.O. BOX 506  
MERRIFIELD, VA 22116

Cindy 9/13/2004

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/01/2004

REEL/FRAME: 015066/0467  
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).  
DOCKET NUMBER: LITP0043USA

ASSIGNEE:  
SUN, YU-HUNG

DOC DATE: 08/16/2004

ASSIGNEE:  
LITE-ON IT CORPORATION  
15F, 392, RUEY KUANG ROAD, NEIHU  
TAIPEI CITY, TAIWAN

SERIAL NUMBER: 10711212  
PATENT NUMBER:  
TITLE: DISK DISCRIMINATION METHOD

FILING DATE:  
ISSUE DATE:

AUG 3 2007

015066/0467 PAGE 2

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AUG 8 2007

## PATENT ASSIGNMENT

Electronic Version v08

Stylesheet Version v02

09/01/2004  
800013520

SUBMISSION TYPE:	NEW ASSIGNMENT	APPLICATION NUMBER <b>10/711212</b>
NATURE OF CONVEYANCE:	ASSIGNMENT OF ASSIGNOR'S INTEREST	
CONVEYING PARTY DATA		
Name	Execution Date	
Yu-Hung Sun	2004-08-16	

### RECEIVING PARTY DATA

Name	Street Address	Internal Address	City	State/Country	Postal Code
LITE-ON IT CORPORATION	15F, 392, Ruey Kuang Road, Neihu		Taipei City	TAIWAN	

### CORRESPONDENCE DATA

FAX NUMBER: 886229295950

*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*

When the customer number has been provided, the Office of Public Records will obtain the correspondence data from the official record on file at the USPTO.

CUSTOMER NUMBER: 027765

NAME OF PERSON SIGNING:	WINSTON HSU
DATE SIGNED:	2004-08-31

Total Attachments: 1  
source=LITP0043-0-A1ASS1.tif

CH \$40.00 503105 10711212

AUG 3 2007



PTO/SB/21 (04-07)

Approved for use through 09/30/2007. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/711,212
Filing Date	09/01/2004
First Named Inventor	Yu-Hung Sun
Art Unit	2627
Examiner Name	TRAN, THANG V
Total Number of Pages in This Submission	10
Attorney Docket Number	LITP0043USA

### ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below): <ul style="list-style-type: none"> <li>1. A copy of the Front Page of Patent.</li> <li>2. A copy of Fee Transmittal submitted on 05/15/2007</li> <li>3. Copies of the Notice of Recordation dated 09/02/2004</li> <li>4. PTO/SB/44</li> </ul>
Remarks		
Request for Certificate of Correction of Office Mistake		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	North America Intellectual Property Corporation		
Signature			
Printed name	Winston Hsu		
Date	JUL 26 2007	Reg. No.	41,526

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Josefina Wang		Date JUL 26 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AUG 3 2007



Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

PTO/SB/17 (05-07)

Approved for use through 05/31/2007. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

## FEE TRANSMITTAL For FY 2007

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	(\\$) 0.00
-------------------------	------------

Complete if Known	
Application Number	10/711,212
Filing Date	09/01/2004
First Named Inventor	Yu-Hung Sun
Examiner Name	TRAN, THANG V
Art Unit	2627
Attorney Docket No.	LITP0043USA

### METHOD OF PAYMENT (check all that apply)

- Check  Credit Card  Money Order  None  Other (please identify): \_\_\_\_\_
- Deposit Account Deposit Account Number: 50-3105 Deposit Account Name: North America Intellectual Property Corporation
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- Charge fee(s) indicated below  Charge fee(s) indicated below, except for the filing fee
- Charge any additional fee(s) or underpayments of fee(s)  Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

<u>Application Type</u>	<u>FILING FEES</u>		<u>SEARCH FEES</u>		<u>EXAMINATION FEES</u>		<u>Fees Paid (\$)</u>
	<u>Fee (\$)</u>	<u>Small Entity</u>	<u>Fee (\$)</u>	<u>Small Entity</u>	<u>Fee (\$)</u>	<u>Small Entity</u>	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

#### 2. EXCESS CLAIM FEES

##### Fee Description

Each claim over 20 (including Reissues)

##### Small Entity

Fee (\$) Fee (\$)

50 25

Each independent claim over 3 (including Reissues)

200 100

Multiple dependent claims

360 180

##### Total Claims

Extra Claims Fee (\$) Fee Paid (\$)

##### Multiple Dependent Claims

Fee (\$) Fee Paid (\$)

- 20 or HP =    x    =     
HP = highest number of total claims paid for, if greater than 20.

Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)  
- 3 or HP =    x    =     
HP = highest number of independent claims paid for, if greater than 3.

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$) Fee Paid (\$)  
- 100 =    / 50 =    (round up to a whole number) x    =   

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Certificate of Correction    0

### SUBMITTED BY

Signature	<i>Winston Hsu</i>	Registration No. (Attorney/Agent) 41,526	Telephone 3027291562
Name (Print/Type)	Winston Hsu	Date	JUL 26 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AUG 3 2007

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,233,556 B2

APPLICATION NO.: 10/711212

ISSUE DATE : Jun. 19, 2007

INVENTOR(S) : Yu-Hung Sun

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page, Item (73), Assignee,

the residence should be corrected from "Nelhu" to --Neihu --

### MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AUG 3 2007